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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,411	12/21/2005	Katsuaki Nakamura	F-8809	1648

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EXAMINER	
YANG, JIE	
ART UNIT	PAPER NUMBER
1793	
MAIL DATE	DELIVERY MODE
08/03/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/549,411	NAKAMURA ET AL.	
	Examiner	Art Unit	
	JIE YANG	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 May 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *87,89 and 90* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *87,89 and 90* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-86 and 88 have been cancelled; claim 87 is amended; and claims 87, 89, and 90 remain for examination. Claim 87 is an independent claim.

Status of the Previous Rejection

Previous objection of claim 87 because of the informalities has been withdrawn in view the Applicant's amendment filed on 5/24/2010.

Previous rejection of claims 87, 88, and 90 under 35 U.S.C. 102(b) as anticipated by Nakamura (JP 2001-321825 with machine English translation, thereafter JP'825) has been withdrawn in view the Applicant's amendment filed on 5/24/2010. However, upon further consideration, a new ground(s) of rejection is made as following.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 87 and 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (JP 2001-321825 with machine English translation, thereafter JP'825) in view of Rosales et al (US 3,794,528, thereafter US'528).

JP'825 is applied to claims 87 and 90 for the same reason as stated in the previous office action marked 2/18/2010.

Regarding the newly added limitation of aging treatment by maintaining the metal body at a temperature which does not turn the metal structure into coarser grain structure in locally lowering the deformation resistance in claim 87, although JP'825 teaches that the fine grain metal samples have been pull test under 400°C with remarkable ductility improvement (Paragraph [0027] of JP'825), JP'825 does not teach intensely perform the aging operation as recited in the instant claim. However, it is a well-known technique for aging a metal material after cold-deformation as evidenced by US'528. US'528 teaches a thermo-mechanical method of forming high strength beta-titanium alloys (Title of US'528). US'528 teaches aging the metal material after cold working (Col 3, ln 51-66 of US'528) and this method can control the microstructure of the metastable beta-alloys to obtain fine homogeneous distribution of the alpha-phase in the beta-matrix (Col 7, ln13-17 of US'528). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply proper aging process as demonstrated by US'528 in the process of JP'825 in order to obtain a fine

microstructure material with the desired strength and ductility (claim 1 and Col 8, ln 14-15 of US'528).

Claim 89 is rejected 35 U.S.C. 103(a) as being unpatentable over JP'825 in view of US'528 as applied to claims 87 and 90, and further in view of Ozawa (US 6,742,374 B2, thereafter, US'374).

JP'825 in view of US'528 is applied to claim 87 and 90 as discussed above, US'374 is further applied to claim 89 for the same reason as stated in the previous office action marked 2/18/2010.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 87 and 90 are rejected on the ground of nonstatutory obviousness type double patenting as being unpatentable over claims 1-20 of copending application No. 12/002,951, now updated as US patent 7,559,211 B2 in view of US'528.

Claims 1-20 of US 7,559,211 are applied to claims 87 and 90 for the same reason as stated in the previous office action marked 2/18/2010.

Claims 1-20 of US 7,559,211 do not teach intensely perform the aging operation as recited in the instant claim 87. However, it is a well-known technique for aging a metal material after cold-deformation as evidenced by US'528. US'528 teaches a thermo-mechanical method of forming high strength beta-titanium alloys (Title of US'528). US'528 teaches aging the metal material after cold working (Col 3, ln 51-66 of US'528) and this method can control the microstructure of the metastable beta-alloys to obtain fine homogeneous distribution of the alpha-phase in the beta-matrix (Col 7, ln13-17 of US'528). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the well-known aging process as demonstrated by US'528 in the process of Claims 1-20

of US 7,559,211 in order to obtain a fine microstructure material with the desired strength and ductility (claim 1 and Col 8, ln 14-15 of US'528).

Claim 89 is rejected on the ground of nonstatutory obviousness type double patenting as being unpatentable over claims 1-20 of copending application No. 12/002,951, now updated as US patent 7,559,211 B2 in view of US'528, and further in view of US'374.

Claims 1-20 of US 7,559,211 in view of US'528 is applied to claim 87 and 90 as discussed above, US'374 is applied to claim 89 for the same reason as stated in the previous office action marked 2/18/2010.

Claims 87 and 90 are rejected on the ground of nonstatutory obviousness type double patenting as being unpatentable over claims 1-35 of copending application No. 10/529,807, now updated as claims 1-4 of US patent 7,637,136 B2 in view of US'528.

Claims 1-4 of US 7,637,136 are applied to claims 87 and 90 for the same reason as stated in the previous office action marked 2/18/2010.

Claims 1-4 of US 7,637,136 do not teach intensely perform the aging operation as recited in the instant claim 87. However,

it is a well-known technique for aging a metal material after cold-deformation as evidenced by US'528. US'528 teaches a thermo-mechanical method of forming high strength beta-titanium alloys (Title of US'528). US'528 teaches aging the metal material after cold working (Col 3, ln 51-66 of US'528) and this method can control the microstructure of the metastable beta-alloys to obtain fine homogeneous distribution of the alpha-phase in the beta-matrix (Col 7, ln13-17 of US'528). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the well-known aging process as demonstrated by US'528 in the process of Claims 1-4 of US 7,637,136 in order to obtain a fine microstructure material with the desired strength and ductility (claim 1 and Col 8, ln 14-15 of US'528).

Claim 89 is rejected on the ground of nonstatutory obviousness type double patenting as being unpatentable over claims 1-20 of copending application No. 12/002,951, now updated as US patent 7,559,211 B2 in view of US'528, and further in view of US'374.

Claims 1-4 of 7,637,136 in view of US'528 is applied to claim 87 and 90 as discussed above, US'374 is applied to claim

89 for the same reason as stated in the previous office action marked 2/18/2010.

Response to Arguments

Applicant's arguments filed on 5/24/2010 with respect to claims 87, 89, and 90 have been fully considered but they are not persuasive. Regarding the Applicant's arguments directed to the amended features, the examiner's position was stated above.

The applicant argues that both of JP'825 and Roseales et al (US'528) neither discloses nor suggests the additionally claimed procedure of performing aging treatment by maintaining the metal body at a temperature (usually a low temperature) which does not turn the metal structure into coarse grain structure as recited in the instant claim 87. In response, the Examiner notes that JP'825 does not teach intensely perform the aging operation as recited in the instant claim. However, it is a well-known technique for aging a metal material after cold-deformation as evidenced by US'528. US'528 teaches properly choosing the aging conditions after cold working to control the microstructure in order to obtain fine homogeneous distribution of the alpha-phase in the beta-matrix (Col 7, ln 13-54 of US'528). US'528 is further applied as evidence reference in the rejections on the ground of nonstatutory obviousness type double patenting as discussed above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jie Yang whose telephone number is 571-2701884. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-2721244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business

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JY

/ Roy King/

Supervisory Patent Examiner, Art Unit 1793